Overview: Office of Genomics and Disease Prevention, CDC

The Centers for Disease Control and Prevention (CDC), the nation's primary disease prevention agency, established the Office of Genetics and Disease Prevention in 1997. The office was renamed the Office of Genomics and Disease Prevention (OGDP) in 2003. OGDP provides national public health leadership while building partnerships with other federal agencies, public health organizations, professional groups, and the private sector.

Our Vision

To improve population health and prevent disease through the application of genomic information.

Our Mission

To integrate genomics into public health research, policy, and programs.

Our Goals

I. Integrate genomics into public health research
II. Assess the value of family history and genomic tests for population health
III. Incorporate genomics into public health practice

Translating Genomic Goals Into Action

I. Integrating Genomics Into Public Health Research

CDC and its partners use epidemiologic and laboratory studies to examine the impact of genetic, environmental, and behavioral interactions on population health. Integrating genomics into public health investigations, including investigations of infectious disease outbreaks, toxic exposures, or adverse outcomes of interventions (for instance, vaccination), is an important challenge for public health.

Genomics can provide new insights into why some people, but not others, get sick from certain infections, environmental exposures, and behaviors. Knowing who will get sick or how many people are at increased risk is useful for identifying environmental, behavioral, or pharmaceutical interventions that will reduce the public's disease burden.

For example, in collaboration with the National Institutes of Health (NIH), a CDC-wide team is measuring population variation of genes using stored DNA samples collected during the third National Health and Nutrition Examination Survey (NHANES III). Understanding variation in these genes is important for public health research and program planning.

II. Assessing the Value of Family History and Genomic Tests for Population Health

Family history information can be used to assess the risk of developing common diseases and to influence early detection and prevention strategies. A family history assessment is also the first step toward identifying families with increased risk who may benefit from genetic testing. This information is also valuable for creating appropriate health education and behavior modification strategies for high-risk families.

In 2002, CDC and its partners launched a public health initiative to develop and evaluate a family history tool. This tool will be used to help identify individuals at increased familial risk for common chronic diseases — including heart disease, diabetes, and colorectal cancer — and to offer guidance on disease prevention.

CDC strives to further the safe, effective, and appropriate use of genetic testing by collecting valid clinical and laboratory data on genetic tests, and also by communicating the latest information to consumers, practitioners, and policy makers. CDC and its partners assess the impact of these activities on public health by developing population-based information about consumer and provider knowledge, attitudes, and use of genetic tests.

III. Incorporating Genomics Into Public Health Practice

CDC integrates genomics into public health programs, including chronic disease prevention, infectious disease assessment, and workplace evaluations. In 2001, CDC convened a Summit on Genomics and Chronic Diseases to raise awareness and define program priorities. By sponsoring conferences, workshops, training, and career development opportunities, CDC is helping public health professionals learn how to use genomics in disease prevention efforts. CDC has collaborated with leaders in local, state, and federal public health programs to develop a set of competencies in genomics for the public health workforce.

In 2001, CDC established the first Centers for Genomics and Public Health at three schools of public health in order to develop regional hubs of expertise for integrating genomics into public health practice. In 2003, CDC established cooperative agreements with four state health agencies to develop or expand their capacity for genomics leadership and to promote coordination.

CDC is dedicated to the dissemination of quality information about genomics and health. The OGDP Web site plays a major, ongoing role as a clearinghouse for information about translating genomics into public health practice. For example, the *Genomics and Health Weekly Update* features links to current news items and scientific publications, events, and training opportunities. This is just one example of the many health communication strategies that CDC is using to reach public health professionals.

For more information, please visit CDC's Office of Genomics and Disease Prevention Web site at http://www.cdc.gov/genomics.